

5

10

15 Claims

1. A process for vulcanizing rubber or latex by adding a mixture M comprising a component a) made from
 - 20 a1) from 20 to 96% by weight of sulfur,
 - a2) from 4 to 80% by weight of a complexer,
and, where appropriate, comprising other additives b),

25 to the rubber or latex and then carrying out the vulcanization, which comprises using a component a) whose average primary particle size is in the range from 0.05 to 20 μm .

30 2. A process as claimed in claim 1, wherein the complexer a2) comprises a polymeric complexer compound.

35 3. A process as claimed in claim 1 or 2, wherein the polymeric complexer a2) is a ligninsulfonate, a β -naphthalenesulfonic acid-formaldehyde condensate, or a mixture of ligninsulfonate and β -naphthalenesulfonic acid-formaldehyde condensate.

40 4. A process as claimed in any of claims 1 to 3, wherein the polymeric complexer a2) is an alkali metal ligninsulfonate and/or an alkaline earth metal ligninsulfonate.

45 5. A process as claimed in any of claims 1 to 4, wherein the mixture M is free-flowing with an average particle size of from 50 μm to 4 mm.

6. A process as claimed in any of claims 1 to 5, wherein the mixture M is a liquid dispersion.
7. The use of a mixture M — as defined in any of claims 1 to 6 —
5 as agent for vulcanizing rubber or latex.
8. A sulfur-containing composition made from 20 to 96% by weight
of sulfur and from 4 to 80% by weight of a complexer, wherein
the average primary particle size is in the range from 0.05
10 to 20 μm .
9. A sulfur-containing composition as claimed in claim 8, where
the complexer comprises a polymeric complexer compound.
- 15 10. A sulfur-containing composition as claimed in claim 8 or 9,
where the polymeric complexer is a ligninsulfonate, a
 β -naphthalensulfonic acid-formaldehyde condensate, or a
mixture of ligninsulfonate and β -naphthalesulfonic
acid-formaldehyde condensate.

20

25

30

35

40

45